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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/804,962 | 03/13/2001 | Mark John LaCour | | 1181 |

7590

10/06/2004

PHILLIPS PETROLEUM COMPANY
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BARTLESVILLE, OK 74004

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| EXAMINER |
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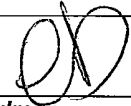
MANOHARAN, VIRGINIA

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| ART UNIT | PAPER NUMBER |
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1764

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|-----------------------------------|---|
| Office Action Summary | Application No. 09/804,962 | Applicant(s) LACOUR, MARK JOHN | |
| | Examiner Virginia Manoharan | Art Unit 1764 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The specification had not been checked to the extent necessary to determine the presence of all possible minor errors e.g. typographical, grammar, idiomatic, syntax and etc. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bannon (4,490,215) or Molique (3,230,158).

Bannon is deemed to anticipate or renders obvious the separator as claimed in claim 1; and the process as claimed in claim 11. That is, Bannon discloses a separator comprising: a vessel (2) having an inside wall; at least one fractionation tray including a bottom tray (4); vapor delivery means (8) operably related in fluid flow communication with said vessel for delivering vapor to said vessel at a spatial location below said

Art Unit: 1764

bottom tray; and liquid removal means (7) operably related in fluid flow communication with said bottom tray and said vessel for removing accumulated liquid on said bottom tray from said vessel as broadly claimed in claim 1.

Likewise, Molique shows in Fig. 1, a liquid removal means (13) operably related in fluid flow communication for removing accumulated liquid on bottom tray (11) from said vessel (2), said a vapor delivery means (9) operably related in fluid flow communication with said vessel for delivering vapor to said vessel at a specific location below said bottom tray.

Claims 2-10 and 121-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bannon (4,490,215) or Molique (3,230,158) in view of Kraft (2,534,173).

Bannon and Molique are discussed supra. Bannon or Molique also appears to show the liquid removal means which comprises a conduit having an outside surface, a first end and a second end, wherein said first end is connected in fluid flow communication with said at least one downcomer and said second end extends through an opening in said inside wall of said vessel, said outside surface of said conduit being in sealing engagement with said opening in said inside wall of said vessel as claimed e.g., in claim 3; and further wherein said vapor delivery means is substantially sealed off from fluid flow communication with said liquid removal means as claimed in claim 6. Note e.g., Fig. 1 of the respective drawings. Nonetheless, Kraft positively teaches the liquid seal at column 6, lines 5-9.

Art Unit: 1764

To incorporate Kraft's teaching to Bannon or Molique process and apparatus would have been obvious to one of ordinary skill in the art inasmuch as all the references are directed to similar processing environment, i.e., to a re-boiling system. Note also the advantage taught at column 5, lines 40-42 of the Kraft's reference. Note further Kraft's disclosure at column 4, lines 58-75 for the claimed liquid level.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Hamblin discloses a vapor-liquid separator means and method.
- b. Hovis et al discloses a separator system.
- c. Erickson shows an intensified locally cocurrent tray contactors.
- d. Ross et al discloses a process and apparatus wherein the vapor stream separates from the liquid within the riser and flows out of the riser upward through the column.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450. The examiner can normally be reached on Tuesday--Friday from 9:30 a.m. to 6:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Manoharan/dh
September 30, 2004


VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 123/764